

ABSTRACT OF THE DISCLOSURE

An image forming device includes a power source with a forward transfer bias circuit for applying a forward transfer bias to the transfer roller based on a detected resistance  $Z$ , during image transfer, and a reverse transfer bias circuit for applying a reverse transfer bias during a cleaning operation, both through constant current control, both circuits connected in series. During constant current control, the forward transfer bias circuit detects the resistance value  $Z$  on the transfer roller using the equation  $Z = (\alpha V_e - R i_1) / i_1$ , where  $\alpha$  is the ratio of voltages in the secondary winding and auxiliary winding in the transformer of a forward transfer booster/rectifying and smoothing circuit,  $V_e$  is the output voltage from a forward transfer output voltage detecting circuit,  $R$  is the resistance in a discharge resistor of a reverse transfer booster/rectifying and smoothing circuit, and  $i_1$  is the constant current setting.